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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/507,204	09/14/2004	Takashi Shimono	258908US2SXPCT	5099
22850	7590	01/11/2006	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			SONG, HOON K	
			ART UNIT	PAPER NUMBER
			2882	

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/507,204	SHIMONO ET AL.	
	Examiner	Art Unit	
	Hoon Song	2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 7-10 is/are rejected.
- 7) ☒ Claim(s) 4-6 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/12/04, 9/14/04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

Claims 4, 6 and 10 are objected to because of the following informalities:

In claim 4 at line 1, delete "w".

In claim 6 at line 2 and 4, "the magnet portions" lacks proper antecedent basis.

In claim 10, at line 5, "the position" should read --a position--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 and 7-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Bensussan et al. (US 4229657).

Regarding claim 1, Bensussan teaches an x-ray apparatus characterized b comprising:

a cathode which irradiates an electron beam (22);

a target (27) which is irradiated by the electron beam and generates x-rays; and

a magnet portion (23) which moves the irradiation position of the electron beam that is irradiated on the target.

Regarding claim 2, Bensussan teaches that the target is disposed so as to be fixed with respect to the cathode (figure 5).

Regarding claim 3, Bensussan teaches that the magnet portion generates a magnetic field which traverses the electron beam (figure 5).

Regarding claim 7, Bensussan that the magnet portion comprises a plurality of pairs of opposing electromagnets (41-44) between which the electron beam is interposed, and control means for changing the synthesized magnetic field formed by these electromagnets (figure 6).

Regarding claim 8, Bensussan teaches that the control means controls at least one of the direction of the energizing amount and the current plurality of pairs of electromagnets (figure 6).

Regarding claim 9, Bensussan teaches that the magnet portion comprises a plurality of pairs of opposing electromagnets between which the electron beam interposed, and selected pair of electromagnets energized and the irradiation position on the target of the electron beam is controlled, and after a set time has elapsed, another set of electromagnets is energized (on and off control of the electromagnets).

Claims 1 and 7-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Hell et al. (US 6292538B1).

Regarding claim 1, Hell teaches an x-ray apparatus characterized b comprising:

a cathode (24) which irradiates an electron beam;

a target (2) which is irradiated by the electron beam and generates x-rays; and

a magnet portion (5) which moves the irradiation position of the electron beam that is irradiated on the target.

Regarding claim 7, Hell teaches that the magnet portion comprises a plurality of pairs of opposing electromagnets between which the electron beam is interposed, and control means for changing the synthesized magnetic field formed by these electromagnets (figure 4-7).

Regarding claim 8, Hell teaches that the control means controls at least one of the direction of the energizing amount and the current plurality of pairs of electromagnets (figure 4-7).

Regarding claim 9, Hell teaches that the magnet portion comprises a plurality of pairs of opposing electromagnets between which the electron beam is interposed, and selected pair of electromagnets energized and the irradiation position on the target of the electron beam is controlled, and after a set time has elapsed, another set of electromagnets is energized (figure 4-7).

Claims 1 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Albert et al. (US 4048496).

Regarding claim 1, Albert teaches an x-ray apparatus characterized by comprising:

- a cathode (19) which irradiates an electron beam (23);
- a target (54) which is irradiated by the electron beam and generates x-rays; and
- a magnet portion (27) which moves the irradiation position of the electron beam that is irradiated on the target (figure 1).

Regarding claim 10, Albert teaches a plurality of focusing electrodes (26) between the target (54) and the cathode (19), and the position of the magnet portion in the axial

direction of the electron beam is between the focusing electrode which is closest to the target side and the cathode (figure 1).

Allowable Subject Matter

Claims 4-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to teach the magnet portion is disposed rotatably about the axial direction of the electron beam and the irradiation position of the electron beam is changed due to this rotation as claimed in dependent claim 4.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoon Song whose telephone number is (571) 272-2494. The examiner can normally be reached on 8:30 AM - 5 PM, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Glick can be reached on (571) 272 - 2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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DAVID V. BRUCE
PRIMARY EXAMINER